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INVERSE SKEWING OF THE LYMPHOCYTE REPERTOIRE FOR THERAPY AND PREVENTION OF DISEASE

Abstract Of The Disclosure

Methods are provided for reducing the number of HIV-infected cells or HIV infection-susceptible cells of a host. Therapeutically this is achieved by exposing the cells to a V region selective element (VRSE) which binds to T cell receptors (TCR) of a V region defined family (VRDF) that is preferentially infected with HIV. The therapeutic VRSE can be an antibody which binds to the VRDF and is capable of causing cytotoxicity of infected and infection-susceptible cells, either alone, in conjunction with host factors, or fused to a toxin. The number of HIV-infection susceptible cells can be reduced prophylactically and in some circumstances therapeutically by immunization with an antibody or T cell receptor that induces an immune response that includes antibodies that bind to the TCR of a VRDF associated with HIV infection. The latter antibodies inhibit the viability of the infected or infection-susceptible cell. Means for diagnosing and treating diseases in which there is biasing of the immune repertoire are also provided, including those circumstances where very little may be known about the causative agent or the mechanism of pathogenesis. This is accomplished by selecting monoclonal antibodies for detecting antibody repertoire changes characteristic of a disease, thereby providing a diagnosis, and perturbing the immune system repertoire in the opposite direction to the direction of skewing that is characteristic of the disease or condition, thereby providing a means of prophylaxis or therapy.